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EXAMINER	
CASCA, FRED A	

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2617	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/733,861	HAYEM ET AL.	
	Examiner	Art Unit	
	FRED A. CASCA	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *1* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 October 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7 and 12-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1-7,13-18 and 27-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restriction

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. **Claims 1-7, 12-18 and 27-30** drawn to a dual-mode wireless communication device and method having a first processor to execute low-level stack operations of a first communication protocol within a first network, a second processor configured to execute a set of protocol stack operations of a second communication protocol within a second network, and a data channel connecting the two processor and providing switching between the networks without dropping connection, classified in class 455, subclass 522.1

II. **Claims 19-26** drawn to a multi mode wireless communication device and method having, in addition to first and second processors, a third processor configured to execute higher-level stack operations of a first processor and a data communication channel connecting the third processor to a second processor, classified in class 370, subclass 338, 503, 349, 467 and 366.

2. Inventions 1 and 2 are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because a third processor, as claimed in claims 19 and 23, to execute higher-level stack operations common to said first and second wireless communications protocols and the second data communications channel between said second integrated circuit and a third integrated

circuit, as claimed in claim 23, do not need to be in the invention of group 1 in order to make the dual-processor of invention function.

The subcombination has separate utility such as a third processor and a third network. A third communication network comprising a different communication protocol can be implemented using the subcombinations of group 2.

The examiner has required restriction between combination and subcombination inventions. Where applicant elects a subcombination, and claims thereto are subsequently found allowable, any claim(s) depending from or otherwise requiring all the limitations of the allowable subcombination will be examined for patentability in accordance with 37 CFR 1.104. See MPEP § 821.04(a). Applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

A telephone call was made to applicant's representative, Mr. Ognyan Beremski, on March 11, 2008 to request an oral election to the above restriction requirement; Mr. Beremski elected the first group of claims, namely claims **1-7, 12-18 and 27-30** without traverse.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 27-30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Independent claims 27, 29 and 30 (added in a previous amendment by applicant) contain subject matter that was not described in the specification. The phrases "a first buffer in communication with said first physical layer module and said first bearer-specific module" and "wherein said first baseband co-processor includes a second buffer in communication with said first bearer-specific module and said data communication channel" in independent claims 27 and 30 and the phrase "a first buffer in communication with said first physical layer module and said first bearer-specific module" in independent claim 29 has not been described in the specification.

Claim Rejections –35 U.S.C. 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 27-28 are rejected under 35 U.S.C. 102(e) as being anticipated by Neumann et al (U.S. Pub. No. 2002/0141441 A1).

Referring to claim 27, Neumann discloses a multi-mode wireless communication device (abstract, and paragraph 0004, "dual mode"), comprising

a first baseband co-processor (paragraphs 6, 19-22, "TDMA co-processor", "slave baseband co-processor") configured to execute low-level stack operations of a first wireless communications protocol employed within a first wireless communications network (figures 2-4, 6B, 8B, and paragraphs 6, 19-21, 25 and 29 "TDMA co-processor", "TDMA IS-136 network", "slave baseband co-processor", "slave baseband co-processor . . . to provide baseband functions according to a second telecommunications standard", "TDMA BB processor", "TDMA co-processor provides TDMA CODEC", note the connection of TDMA BB processor to the TDMA RF where TDMA is the first network, thus, the TDMA processor executes low-level (antenna/RF/physical level) stack operations);

a host baseband processor (Fig. 3 and paragraphs 20-22, "GSM master processor") configured to execute a set of protocol stack operations of a second wireless communications protocol (Figs. 5A-6B, paragraphs 20-22, 29, particularly paragraph 29, lines 2-3, "GSM network", "the GSM master processor 202 controls all GSM system related functions")

employed within a second wireless communications network (figures 1-4, paragraphs 20-22, "GSM network"), and

higher-level stack operations of said first wireless communications protocol (figures 2-3 and paragraphs 21-22, 29, "GSM master processor controls audio input/output … in both first and second modes", note that audio is an application layer thus a higher-level stack operation and the GSM processor controls it both for GSM and TDMA network); and

a data communication channel (Figure 2-3, and paragraph 27, "glue logic") between said host baseband processor (Fig. 2-3, "GSM BB processor") and said first baseband co-processor (Fig. 2, "TDMA BB processor") capable of carrying data received by said multi-mode wireless communication device from said first wireless communications network or sent by said multi-mode wireless communication device through said first wireless communications network (figures 1-4, paragraphs 22-26);

wherein said first baseband co-processor comprises a first physical layer module for implementing physical function (Figures 2-4, 6A, 6B and 8B and the corresponding paragraphs, particularly paragraphs 45, 50, "RF front end 216"),

a first bearer-specific module for implementing bearer-specific stack function related to said first wireless communication protocol (Figures 2-4, 6A, 6B, 8A and 8B and the corresponding paragraphs, particularly paragraphs 45, 50, "TDMA RF unit 218 for bandpass filtering 618"),

and a first buffer in communication with said first physical layer module and said first bearer-specific module (Figures 2-3, 6A, 6B, 8A and 8B and the corresponding paragraphs,

particularly figure 2, "Flash"), note that the flash memory is connected to the physical layer module and the bearer-specific module);

wherein said first baseband co-processor includes a second buffer in communication with said first bearer-specific module and said data communication channel (Figures 2-3, 6A, 6B, 8A and 8B and the corresponding paragraphs, particularly figure 2, "SRAM"), note that the SRAM memory is connected to the physical layer module and the bearer-specific module); and

wherein said host baseband processor includes a common stack functions module and one or more application modules (Figures 2-3, 5A-8B and paragraph 21, "GSM master processor controls audio input/output", note that audio is common for both protocols), said common stack functions module executing functions common to said first and second wireless communications protocols (Figures 2-3, 5A-8B and paragraph 21, note the audio function for both networks are controlled by the GSM processor).

Referring to claim 28, Neumann discloses the device according to claim 27, wherein said host baseband processor includes a common stack functions module and one or more application modules, said common stack functions module executing functions common to said first and second wireless communications protocols (Figures 2-3, 5A-8B and paragraph 21).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject

matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1-2, 4-7, 12-14, 16-18 and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neumann et al (U.S. Pub. No. 2002/0141441 A1), in view of Kransmo (US 6,594,242 B1).

Referring to claim 1, Neumann discloses a multi-mode wireless communication device (abstract, and paragraph 0004, "dual mode"), comprising

a first baseband co-processor (paragraphs 6, 19-22, "TDMA co-processor", "slave baseband co-processor") configured to execute low-level stack operations of a first wireless communications protocol employed within a first wireless communications network (figures 2-4, 6B, 8B, and paragraphs 6, 19-21, 25 and 29 "TDMA co-processor", "TDMA IS-136 network", "slave baseband co-processor", "slave baseband co-processor . . . to provide baseband functions according to a second telecommunications standard", "TDMA BB processor", "TDMA co-processor provides TDMA CODEC", note the connection of TDMA BB processor to the TDMA RF where TDMA is the first network, thus, the TDMA processor executes low-level (antenna/RF/physical level) stack operations);

a host baseband processor (Fig. 3 and paragraphs 20-22, "GSM master processor") configured to execute a set of protocol stack operations of a second wireless communications protocol (Figs. 5A-6B, paragraphs 20-22, 29, particularly paragraph 29, lines 2-3, "GSM network", "the GSM master processor 202 controls all GSM system related functions") employed within a second wireless communications network (figures 1-4, paragraphs 20-22, "GSM network")

and higher-level stack operations of said first wireless communications protocol (figures 2-3 and paragraphs 21-22, 29, "GSM master processor controls audio input/output … in both first and second modes", note that audio is an application layer thus a higher-level stack operation and the GSM processor controls it both for GSM and TDMA network);

and a data communication channel (Figure 2-3, and paragraph 27, "glue logic") between said host baseband processor (Fig. 2-3, "GSM BB processor") and said first baseband co-processor (Fig. 2, "TDMA BB processor") capable of carrying data received by said multi-mode wireless communication device from said first wireless communications network or sent by said multi-mode wireless communication device through said first wireless communications network (figures 1-4, paragraphs 22-26);

Neumann further teaches one or both of said first baseband co-processor and said host baseband processor (the GSM processor) enabling ***selecting*** between bearers utilizing low-level stack operations and set of protocol stack operations (paragraph 37, "GSM master processor … selects the mode of operation, e.g., whether GSM mode or TDMA").

Neumann is silent about switching between bearers and maintaining bearer connections during switching as claimed.

However, the concepts of switching between different networks and hence different protocols and maintaining the connection are conventional in the art. Specifically, during a handoff process from a first network using a first protocol to a second network using a second protocol a switch between the networks has to take place. Consequently, the switch between different networks requires switching between different protocols.

Kransmo teaches a handover and roaming of a dual mode wireless terminal from a 3G network to a 2G network (abstract, col. 1, lines 50-67, and col. 2, lines 18-21, "handover and roaming of a wireless terminal from a third generation . . . to a second generation (2G) communication system", "operating protocols", note that a dual-mode mobile terminal capable of operating and roaming in two different systems is provided, where the handover process from a 3G system to a 2G inherently allows the dual mode wireless terminal to switch networks and maintain connection with at least one of the 2G and/or 3G networks and thus maintaining connection bearer a connection)

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the system of Neumann by incorporating the teachings of Kransmo and consequently modifying one or both of processors of Neumann (e.g., the GSM processor) to enable switching between bearers (since during handover a network switch/exchange takes place and thus a protocol switch takes place) utilizing low-level stack operations and set of protocol stack operations and maintain bearer connections (since in a handover process the wireless terminal maintains connection with at least one of the networks and thus a connection at least with one protocol/bearer of the two networks is maintained), for the purpose allowing the multi-mode wireless device to roam between different networks and thus user convenience.

Referring to claim 2, the combination of Neumann/Kransmo disclose the device of claim 1, and further disclose the set of protocol stack operations comprises a complete set of protocol stack operations of said second wireless communications protocol (paragraph 29).

Referring to claim 4, the combination of Neumann/Kransmo disclose the device of claim 3, and further disclose the set of protocol stack operations comprises higher-level protocol stack

operations of said second wireless communications protocol (Neumann, figures 2-8B, paragraph 29).

Referring to claim 5, the combination of Neumann/Kransmo discloses the device of claim 1, and further discloses the low-level stack operations include physical layer functions (see the rejection of claim 1 above and figures 2-4, 6A, 6B and 8B, note the antenna in figure 2-3, 6A, 6B and 8B) and inherently bearer-specific stack functions peculiar to said first wireless communications protocol (Neumann, Figures 2-3 and 5A-6B and their corresponding paragraphs, "TDMA RF", "GSM RF").

Referring to claim 6, the combination of Neumann/Kransmo disclose the device of claim 5, and further disclose higher-level stack functions comprise stack functions common to said first and second wireless communication protocols (Neumann, paragraph 21, note that audio is common for both protocols).

Referring to claim 7, the combination of Neumann/Kransmo discloses the device of claim 1, and further discloses host baseband processor is further configured to execute application-layer functions (Neumann, paragraphs 21).

Referring to claim 12, the combination of Neumann/Kransmo disclose the device of claim 1, and further disclose first wireless communications protocol comprises WCDMA and said second wireless communications protocol comprises GSM (Kransmo, col. 2, line 59 through col. 3, line 15).

Referring to claims 13-14 and 16-18, claims 13-14 and 16-18 recite features analogous to the features of claims 1-2 and 4-6 (as rejected above). Thus, the combination of

Neumann/Kransmo discloses all elements of claims 13-14 and 16-18 (please see the rejection of claim 1-2 and 4-6 above).

Referring to claim 29, Neumann discloses a multi-mode wireless communication device (abstract, and paragraph 0004, "dual mode"),

comprising a first baseband co-processor (paragraphs 6, 19-22, "TDMA co-processor", "slave baseband co-processor") configured to execute low-level stack operations of a first wireless communications protocol employed within a first wireless communications network (figures 2-4, 6B, 8B, and paragraphs 6, 19-21, 25 and 29 "TDMA co-processor", "TDMA IS-136 network", "slave baseband co-processor", "slave baseband co-processor . . . to provide baseband functions according to a second telecommunications standard", "TDMA BB processor", "TDMA co-processor provides TDMA CODEC", note the connection of TDMA BB processor to the TDMA RF where TDMA is the first network, thus, the TDMA processor executes low-level (antenna/RF/physical level) stack operations);

a host baseband processor (Fig. 3 and paragraphs 20-22, "GSM master processor") configured to execute a set of protocol stack operations of a second wireless communications protocol (Figs. 5A-6B, paragraphs 20-22, 29, particularly paragraph 29, lines 2-3, "GSM network", "the GSM master processor 202 controls all GSM system related functions") employed within a second wireless communications network (figures 1-4, paragraphs 20-22, "GSM network")

and higher-level stack operations of said first wireless communications protocol (figures 2-3 and paragraphs 21-22, 29, "GSM master processor controls audio input/output … in both

first and second modes", note that audio is an application layer thus a higher-level stack operation and the GSM processor controls it both for GSM and TDMA network);

and a data communication channel (Figure 2-3, and paragraph 27, "glue logic") between said host baseband processor (Fig. 2-3, "GSM BB processor") and said first baseband co-processor (Fig. 2, "TDMA BB processor") capable of carrying data received by said multi-mode wireless communication device from said first wireless communications network or sent by said multi-mode wireless communication device through said first wireless communications network (figures 1-4, paragraphs 22-26);

wherein said first baseband co-processor comprises a first physical layer module for implementing physical function (Figures 2-4, 6A, 6B and 8B and the corresponding paragraphs, particularly paragraphs 45, 50, "RF front end 216"),

a first bearer-specific module for implementing bearer-specific stack function related to said first wireless communication protocol (Figures 2-4, 6A, 6B, 8A and 8B and the corresponding paragraphs, particularly paragraphs 45, 50, "TDMA RF unit 218 for bandpass filtering 618"),

and a first buffer in communication with said first physical layer module and said first bearer-specific module (Figures 2-3, 6A, 6B, 8A and 8B and the corresponding paragraphs, particularly figure 2, "Flash"), note that the flash memory is connected to the physical layer module and the bearer-specific module)

Neumann further teaches one or both of said first baseband co-processor and said host baseband processor (the GSM processor) enabling ***selecting*** between bearers utilizing low-level

stack operations and set of protocol stack operations (paragraph 37, "GSM master processor … selects the mode of operation, e.g., whether GSM mode or TDMA").

Neumann is silent about switching between bearers and maintaining bearer connections during switching as claimed.

However, the concepts of switching between different networks and hence different protocols and maintaining the connection are conventional in the art. Specifically, during a handoff process from a first network using a first protocol to a second network using a second protocol a switch between the networks has to take place. Consequently, the switch between different networks requires switching between different protocols.

Kransmo teaches a handover and roaming of a dual mode wireless terminal from a 3G network to a 2G network (abstract, col. 1, lines 50-67, and col. 2, lines 18-21, "handover and roaming of a wireless terminal from a third generation . . . to a second generation (2G) communication system", "operating protocols", note that a dual-mode mobile terminal capable of operating and roaming in two different systems is provided, where the handover process from a 3G system to a 2G inherently allows the dual mode wireless terminal to switch networks and maintain connection with at least one of the 2G and/or 3G networks and thus maintaining connection bearer a connection)

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the system of Neumann by incorporating the teachings of Kransmo and consequently modifying one or both of processors of Neumann (e.g., the GSM processor) to enable switching between bearers (since during handover a network switch/exchange takes place and thus a protocol switch takes place) utilizing low-level stack operations and set of protocol stack

operations and maintain bearer connections (since in a handover process the wireless terminal maintains connection with at least one of the networks and thus a connection at least with one protocol/bearer of the two networks is maintained), for the purpose allowing the multi-mode wireless device to roam between different networks and thus user convenience.

Referring to claim 30, Neumann discloses a multi-mode wireless communication device (abstract, and paragraph 0004, "dual mode"),

comprising a first baseband co-processor (paragraphs 6, 19-22, "TDMA co-processor", "slave baseband co-processor") configured to execute low-level stack operations of a first wireless communications protocol employed within a first wireless communications network (figures 2-4, 6B, 8B, and paragraphs 6, 19-21, 25 and 29 "TDMA co-processor", "TDMA IS-136 network", "slave baseband co-processor", "slave baseband co-processor . . . to provide baseband functions according to a second telecommunications standard", "TDMA BB processor", "TDMA co-processor provides TDMA CODEC", note the connection of TDMA BB processor to the TDMA RF where TDMA is the first network, thus, the TDMA processor executes low-level (antenna/RF/physical level) stack operations);

a host baseband processor (Fig. 3 and paragraphs 20-22, "GSM master processor") configured to execute a set of protocol stack operations of a second wireless communications protocol (Figs. 5A-6B, paragraphs 20-22, 29, particularly paragraph 29, lines 2-3, "GSM network", "the GSM master processor 202 controls all GSM system related functions") employed within a second wireless communications network (figures 1-4, paragraphs 20-22, "GSM network")

and higher-level stack operations of said first wireless communications protocol (figures 2-3 and paragraphs 21-22, 29, "GSM master processor controls audio input/output … in both first and second modes", note that audio is an application layer thus a higher-level stack operation and the GSM processor controls it both for GSM and TDMA network);

and a data communication channel (Figure 2-3, and paragraph 27, "glue logic") between said host baseband processor (Fig. 2-3, "GSM BB processor") and said first baseband co-processor (Fig. 2, "TDMA BB processor") capable of carrying data received by said multi-mode wireless communication device from said first wireless communications network or sent by said multi-mode wireless communication device through said first wireless communications network (figures 1-4, paragraphs 22-26);

wherein said first baseband co-processor comprises a first physical layer module for implementing physical function (Figures 2-4, 6A, 6B and 8B and the corresponding paragraphs, particularly paragraphs 45, 50, "RF front end 216"),

a first bearer-specific module for implementing bearer-specific stack function related to said first wireless communication protocol (Figures 2-4, 6A, 6B, 8A and 8B and the corresponding paragraphs, particularly paragraphs 45, 50, "TDMA RF unit 218 for bandpass filtering 618"),

and a first buffer in communication with said first physical layer module and said first bearer-specific module (Figures 2-3, 6A, 6B, 8A and 8B and the corresponding paragraphs, particularly figure 2, "Flash"), note that the flash memory is connected to the physical layer module and the bearer-specific module),

wherein said first baseband co-processor comprises a second buffer in communication with said first bearer-specific module and said data communication channel (Figures 2-3, 6A, 6B, 8A and 8B and the corresponding paragraphs, particularly figure 2, "SRAM"), note that the SRAM memory is connected to the physical layer module and the bearer-specific module);

Neumann further teaches one or both of said first baseband co-processor and said host baseband processor (the GSM processor) enabling ***selecting*** between bearers utilizing low-level stack operations and set of protocol stack operations (paragraph 37, "GSM master processor … selects the mode of operation, e.g., whether GSM mode or TDMA").

Neumann is silent about switching between bearers and maintaining bearer connections during switching as claimed.

However, the concepts of switching between different networks and hence different protocols and maintaining the connection are conventional in the art. Specifically, during a handoff process from a first network using a first protocol to a second network using a second protocol a switch between the networks has to take place. Consequently, the switch between different networks requires switching between different protocols.

Kransmo teaches a handover and roaming of a dual mode wireless terminal from a 3G network to a 2G network (abstract, col. 1, lines 50-67, and col. 2, lines 18-21, "handover and roaming of a wireless terminal from a third generation . . . to a second generation (2G) communication system", "operating protocols", note that a dual-mode mobile terminal capable of operating and roaming in two different systems is provided, where the handover process from a 3G system to a 2G inherently allows the dual mode wireless terminal to switch networks and

maintain connection with at least one of the 2G and/or 3G networks and thus maintaining connection bearer a connection)

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the system of Neumann by incorporating the teachings of Kransmo and consequently modifying one or both of processors of Neumann (e.g., the GSM processor) to enable switching between bearers (since during handover a network switch/exchange takes place and thus a protocol switch takes place) utilizing low-level stack operations and set of protocol stack operations and maintain bearer connections (since in a handover process the wireless terminal maintains connection with at least one of the networks and thus a connection at least with one protocol/bearer of the two networks is maintained), for the purpose allowing the multi-mode wireless device to roam between different networks and thus user convenience.

9. Claims 3 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neumann et al (U.S. Pub. No. 2002/0141441 A1), in view of Kransmo (US 6,594,242 B1), and further in view of Schmidt (US Pub. No. 2003/0067894 A1).

Referring to claim 3, the combination of Neumann/Kransmo discloses the device of claim 1.

The combination does not disclose a second baseband processor in the format claimed.

Schmidt discloses second baseband processor in communication with a host baseband processor via a data communication channel (Figures 1A-2, abstract, paragraphs 0004, 0010-0011, 23-25, 27-29, 31, 35, 40, 44-46, 49, and 51).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the combination by incorporating the teachings of Schmidt, for the purpose of dividing operations among three processors and thus a more efficient wireless terminal.

Referring to claim 15, claim 15 recites features analogous to the features of claim 3 (as rejected above). Thus, the combination of Neumann/Kransmo discloses all elements of claims 15 (please see the rejection of claim 1-2 and 4-6 above).

Response to Arguments

10. Applicant's arguments with respect to claims 1-30 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred A. Casca whose telephone number is (571) 272-7918. The examiner can normally be reached on Monday through Friday from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Harper, can be reached at (571) 272-7605. The fax number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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